PR-7. CERIC AMMONIUM NITRATE (CAN) CATALYZED SYNTHESIS AND α-GLUCOSIDASE ACTIVITY OF SOME NOVEL TETRAHYDROPYRIDINE PHOSPHONATE DERIVATIVES

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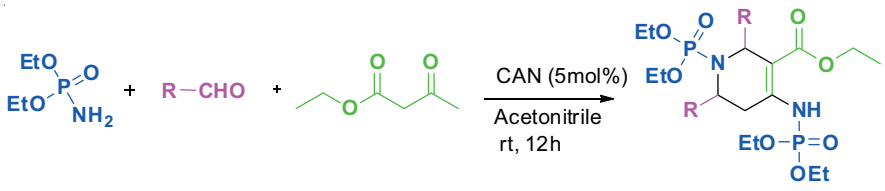
Abstract. A simple and highly efficient multicomponent one-pot synthesis of a series of pharmaceutically interesting functionalized tetrahydropyridine phosphonate derivatives have been developed based on low-cost and environmentally being cerium ammonium nitrate catalyst via tandem reactions of 1,3-dicarbonyl compounds, diethylphosphoramidate and various aromatic aldehydes in acetonitrile at room temperature. High atom economy, good yields, eco-friendliness and mild reaction conditions are some of the important features of this protocol.

Now days, the researchers focused one of the most fundamental heterocycles, Tetrahydropyridines (THPDs) have been the topic of passionate research for their stupendous biological importance. A quite large number of methods have been developed by the very big efforts of chemist's to get libraries containing important THPDs and their derivatives in an efficient, ecological friendly and efficient one pot Multi Component Reaction (MCR). On the source of the reported text till now, tetrahydropyridines (THPDs) have established serious attention as promising structure for several natural and synthetic molecules and have been known as the primary core structure of large diversity of biologically important mainly nitrogen and phosphorus containing heterocyclic compounds. Among the various methods reported for the synthesis of THPDs derivatives viz [1]. Proline mediated cascade Mannich-type cyclization [2], palladium-catalysed cyclizations [3], annulations of aziridines,cyclization of N-allyl amino-substituted adducts [4] and one-pot multicomponent reactions (MCRs) [5].



1 2 (a – j) 3 4 (a – j)

Synthesis of tetrahydropyridine phosphonate derivatives

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